

Application No: 10/035,281
Applicant: Khanna, Rohit Kumar
Filing Date: 01/03/2002

CLAIMS

What I claim as my invention is:

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1. (canceled)
 2. (canceled)
 3. (canceled)
 4. (canceled)
 5. (canceled)
 6. (canceled)
 7. (canceled)
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 10. (canceled)
 11. (canceled)
 12. (canceled)
 13. (canceled)
 14. (canceled)
 15. (canceled)
 16. (canceled)
 17. (canceled)
 18. (canceled)

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19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (new) A method of stabilizing and fusing reshaped lamina after a laminoplasty

comprising the steps of:

displacing the severed edges of a lamina,

providing a spacing means with the edges of the said spacing means contoured to engage
the severed bone edges, and

a fixation means attached to the said spacing means in the middle with curvatures at both
ends allowing bone screw placement through both ends of the fixation means.

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27. (new) The method of claim 26 wherein the said fixation means comprising of an
elongated plate defining a U-shape with curvature at the ends of the longitudinal axis,
downward for fixation to a lamina and upward for fixation to a facet by way of a screw
through bone screw receiving holes at each end of the plate.

28. (new) The method of claim 26 wherein the said fixation means comprising of an
elongated plate with downward curvature at both ends defining a longitudinal axis for
fixation to the lamina through bone receiving holes at each end of the plate.

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29. (new) The method of claim 26 wherein the said fixation means comprising of an elongated plate with downward L-shaped curvature at both ends defining a longitudinal axis for fixation to facet and/or lamina bone on each side through bone receiving holes at each end of the plate.

30. (new) The method of claim 26 wherein the said spacing means comprising of a rectangular shape with straight longitudinal ends to allow for engagement between the lamina.

31. (new) The method of claim 26 wherein the said spacing means comprising of a rectangular shape with concave curved edges contoured at the longitudinal ends to allow for engagement between the lamina.

32. (new) The method of claim 26 wherein the said spacing means comprising of a rectangular shape with both edges at the end defining the longitudinal axis of the spacer have a superior cuff to allow for engagement between the lamina.

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33. (new) The method of claim 26 wherein said fixation means is made from a biocompatible material selected from the group consisting of titanium, titanium alloys, surgical steel, polymeric material, ceramic material, resorbable material, polyglyconate, bone, and hydroxyapatite.

34. (new) The method of claim 26 wherein said spacing means is made from a component taken from the following group: allograft bone, autograft bone, xenograft bone, hydroxyapatite, resorbable material, biocompatible material suitable for bone fusion.

35. (new) A bone spacer comprising of a rectangular shape wherein both edges at the end

defining the longitudinal axis of the spacer have a superior cuff to allow for engagement between the lamina bone ends.

36. (new) The said spacer of claim 35 being hollow with openings at both sides packed with bone fusion material selected from the group consisting of autograft bone, allograft bone, xenograft bone, bone morphogenic protein, hydroxyapatite, a biocompatible material suitable for bone fusion.

37. (new) The said spacer of claim 35 being solid and made from a component taken from the following group: allograft bone, autograft bone, xenograft bone, hydroxyapatite, resorbable material, biocompatible material suitable for fusion.

38. (new) A bone spacer for the lamina of the spine after laminoplasty comprising of a rectangular shape with concave curved edges contoured at the longitudinal ends to allow for engagement between the bone edges.

39. (new) The said bone spacer of claim 38 being made of cortical or cortico-cancellous bone; the said cortico-cancellous bone spacer comprising of cortical bone on the outer sides of longitudinal axis with an inner cancellous bone portion.

40. (new) A method of stabilizing the reshaped lamina after a laminoplasty comprising the steps of:

displacing the severed edge of the lamina at the junction of the lamina and facet, a fixation means comprising of an elongated plate with appendages at either ends prior to the curvature defining a longitudinal axis of the plate to secure the displaced bone ends and maintain their repositioned shape along with fixation of the plate to the bone via bone

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fasteners.

41. (new) The method of claim 40 wherein the said plate comprising of curvature at the ends of the longitudinal axis, downward at one end for fixation to a lamina and upward at the other end for fixation to a facet by way of a screw through bone screw receiving holes at each end of the plate.

42. (new). The method of claim 40 wherein one of the said plate appendages is curved at one end and straight at the other end perpendicular to the longitudinal plate axis and prior to the plate curvature at both ends.

43. (new) The method of claim 40 wherein the said plate appendage is curved at one end perpendicular to the longitudinal plate axis and prior to the plate curvature.

44. (new) The method of claim 40 wherein the said plate appendage at one or both ends perpendicular to the longitudinal plate axis is straight or curved.

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45. (new) The method of claim 40 wherein the said fixation means is made from a biocompatible material selected from the group consisting of titanium, titanium alloys, surgical steel, polymeric material, ceramic material, resorbable material, polyglyconate, bone, and hydroxyapatite.

46. (new) A method of stabilizing the reshaped lamina after a laminoplasty comprising the steps of:

displacing both lamina through severed edges in the middle,
providing fixation means defining a U-shape comprising of a plate with two appendages perpendicular to the longitudinal axis of the fixation means spaced apart in the middle to

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engage the lamina on either side with the said fixation means also comprising of curvatures at both ends to secure the fixation means to the lamina and/or facets on both sides with bone fasteners.

47. (new) The method of claim 46 wherein the said fixation means comprising of an elongated plate with downward L-shaped curvature at both ends defining a longitudinal axis for fixation to facet and/or lamina bone on each side through bone receiving holes at each end of the plate.

48. (new) The method of claim 46 wherein the said plate appendage is curved in the middle perpendicular to the longitudinal plate axis and prior to the plate curvature at both ends to secure the lamina.

49. (new) The method of claim 46 wherein the said plate appendages are straight in the middle perpendicular to the longitudinal plate axis and prior to the plate curvature at both ends.

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50. (new) The method of claim 46 wherein the said plate has a plurality of bone screw receiving holes throughout.

51. (new) The method of claim 46 wherein the said fixation means is made from biocompatible material selected from the group consisting of titanium, titanium alloys, surgical steel, polymeric material, ceramic material, resorbable material, polyglyconate, bone, and hydroxyapatite.